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MASTER THESIS:

The Future of Services

Uncovering Latent Needs Through Trend Analysis

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Abstract

Reflecting an increased interest in service design and service science, this study develops a perspective that unites the Service Dominant Logic, the principles of service design and the foundations of market orientation in a triangular relationship. In this approach, the premises of the SD logic are used to provide support and structure to the principles of service design and market orientation. This perspective is used as a backdrop for the discovery of latent needs. Using an unconventional sample of primary school pupils, customer journey maps and critical incidents were created. The application of these service design tools generated insights into their needs, which could be categorized into themes and-overarching value dimensions. Four dimensions of value were uncovered, namely a *Physical*, *Social*, *Utilitarian* and *Hedonic* Dimension. The analysis of the correlation of these themes and dimensions leads the development of a number of propositions regarding their relationships.

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1. Introduction

Services continue to play an increasingly dominant role in today's economy, with many countries producing more than 70% of their gross domestic product in this field (Ostrom et al., 2010). Services have not only been given a lot of attention by practitioners but also the academic environment has had a profound interest in this field for multiple decades (Berry, 2002; Bitner, 1990; Cermak, File, & Prince, 2011; Day & Wensley, 1988; Parasuraman, Zeithaml, & Berry, 1985). Services will thus continue to interest and challenge both practitioners and academics (Grove, Fisk, & John, 2003; Ostrom et al., 2010).

The growing importance attached to services plays a motivating role for companies going through servitization. Servitization is the "offering [of] fuller market packages or "bundles" of customer-focused combinations of goods, services, support, self-service, and knowledge" (Vandermerwe & Rada, 1988, p. 314). Companies can thereby offer a more holistic solution to a problem, which increases the value that is delivered to customers (Vandermerwe & Rada, 1988). The increasing interest in services and servitization has led to the emergence of the Service-Dominant Logic (SD logic) (Vargo & Lusch, 2004a). More than being a static theory, SD logic is a 'dialogical and collaborative work' (Vargo, 2008, p. 211) that aims to understand and establish a new marketing paradigm (Vargo & Lusch, 2004a). The SD logic prescribes that goods do not have standalone value, but that their value is determined in their use. It is to say that goods only have value when they are used to serve a need. Companies that have gone fully through the servitization process thereby conform to this key premise of the SD logic (L. A. Smith, Maull, & Ng, 2012).

Based on developments such as the emergence of the SD logic, *This is Service Design Thinking* was compiled to delineate and aid service design practices (Stickdorn & Schneider, 2010). This work provides basic principles of Service Design Thinking, as well as a wide range of service design tools that service designers can use at different phases in their development process.

Understanding the needs of customers can be a valuable insight when developing new successful services (Narver & Slater, 1990; Narver, 2004) Such needs may be on the minds of customers already, in which case they are able to express those needs. They may however also be latent needs, in which case they are not yet aware of these future needs(Yannopoulos & Auh, S.Menguc, 2012). Trend analysis can be used to uncover or forecast future or latent needs of customers, by drawing on patterns and developments of the past and present, and extending them to the future (Floyd, 1972). Effective trend analysis will allow companies to be market oriented by drawing on the insights into these latent needs (Stickdorn & Schneider, 2010).

Companies with a market orientation are often framed as being driven by a demand-pull rather than supply-push (Narver & Slater, 1990). By this definition market orientation is structured around the use of customer needs, both expressed as well as latent (Narver, 2004). Having a market orientation has been found to be a successful and profitable strategic direction (Narver & Slater, 1990; Slater & Narver, 1998). The propositions that the SD logic puts forward also have an inherently market oriented approach. Customer plays a pivotal role in both the service delivery as well as value evaluation (Lusch & Vargo, 2006; Vargo & Lusch, 2004a).

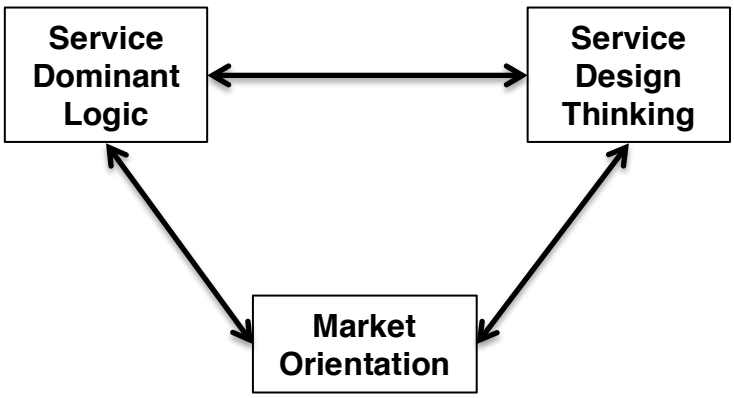
For trend analysis to be of value, two phases of the design process should be highlighted. Firstly, trends must be identified. Secondly, service designers should use the trends as input during their design process when developing new services (Stickdorn & Schneider, 2010). This research therefore aims to answer the question: ***How can key trends in consumer needs be identified and used by service designers when developing new service offerings?***

A key characteristic of services is that they cannot come into existence without the inclusion of the customer (Fließ & Kleinaltenkamp, 2004). This characteristic underlies the importance of the customer in the service delivery process. The customer is also the co-creating and evaluator of quality (Lusch & Vargo, 2006). From these foundations it thus flows that understanding customer needs is crucial for service developers to be able to offer optimal value. This research question is therefore of interest to both academics and practitioners. To answer the research question, the SD logic will be used as a frame of reference and as a mindset within which the question is approached. The characteristics of service design will also be defined and placed within the context of the SD logic. This is because they are in fact two sides of the same coin, in that they are dependent on each other.

Service Design Thinking provides the services to establish the SD logic. The SD logic provides Service Design Thinking with societal relevance (Stickdorn & Schneider, 2010; Vargo & Lusch, 2004a). Furthermore, the value of market orientation for service designers and its relevance for need identification is conceptually re-enforced. The customers needs play a pivotal role in delivering value. Gaining insight into these needs is therefore of crucial importance for services designers who aim to deliver valuable services, and

requires a market orientation (Narver & Slater, 1990; Vandermerwe & Rada, 1988). This places the concepts and content of SD logic, Service Design Thinking and market orientation in a triangular relationship (Figure 1). It formulates a basis on which to base the practical application of the trend analysis tool as presented in This is Service Design Thinking.

FIGURE 1 – Triangular relationship of Concepts



First the SD logic, service design and market orientation literature were be reviewed to establish an understanding of the theoretical background that preceded this study Research conduced with primary pupils provided customer journey maps and critical touch points, which were abstracted and analyzed to uncover trends in service needs. The themes and value constructs that allowed for the definition of propositions that were visualized in a conceptual framework.

2. Literature Review

Through offering services, companies may try to innovate or lengthen the life cycle of their durable goods. This process is known as servitization, and has played an increasingly important role in marketing (Vandermerwe & Rada, 1988). Servitization also highlights the

awareness of companies that rather than offering products, they should offer more holistic solutions to problems. In this context, the distinction between pure service offerings and pure product offerings is blurred. When companies have completely gone though the process of servitization, they in fact only offer solutions to problems (L. A. Smith et al., 2012). These solutions may, depending on the problem, be composed of products and services. In this case, they effectively approach business from the SD logic perspective (Vargo & Lusch, 2004a).

2.1 Service Dominant Logic

The emergence of the SD logic reflects the need for the adoption of a new frame of reference for marketing that incorporates this change in value creation. The core of the SD logic is therefore not a theory but a mindset (Vargo & Lusch, 2004a). The service-centered model of exchange that is derived from the SD logic is originally based on eight foundational premises, but due to its the 'dialogical and collaborative [nature]' (Vargo, 2008, p. 211), these have been altered and tailored to the outcomes of discussions and dialogs (Lusch, Vargo, & O'Brien, 2007; Lusch & Vargo, 2006; Vargo & Lusch, 2004a, 2004b; Vargo, 2008). Table 1 shows the most recent version of Foundational Premises (Vargo & Lusch, 2008).

TABLE 1 – Foundational Premises of the Service Dominant Logic

Foundational Premise 1	Service is the fundamental unit of exchange
Foundational Premise 2	Indirect exchange masks the fundamental unit of exchange.
Foundational Premise 3	Goods are distribution mechanisms for service provision.
Foundational Premise 4	Operant resources are the fundamental source of competitive advantage

Foundational Premise 5	All economies are services economies.
Foundational Premise 6	The customer is always a co-creator of value.
Foundational Premise 7	The enterprise cannot deliver value, but only make value propositions.
Foundational Premise 8	A service-centered view is inherently customer oriented and relational.
Foundational Premise 9	All social and economic actors are resource integrators
Foundational Premise 1	Value is always uniquely and phenomenologically determined by the beneficiary.

(Vargo, 2008)

2.2 Service Design

Service design has only recently emerged as a distinctive field of expertise. Its exact definition has therefore not yet fully crystalized. A recent definition by UK Design Council (as cited in Stickdorn & Schneider, 2010, p. 31) defines service design as being "all about making the service you deliver useful, usable, efficient effective and desirable". The intangibility nature is also expressed in the definition used by the Copenhagen Institute of Interaction Design, which approaches services as "experiences using a combination of intangible and tangible mediums" (as cited in Stickdorn & Schneider, 2010, p. 30). This also reflects many of the characteristics of SD logic, which considers goods to have a contingent value-in-use rather then an absolute value-in-transaction (Vargo & Lusch, 2004a).

The developments in execution and research of design processes have long been relevant to academics and industry practitioners. The GD logic shows a clear evolution of new product processes. The Phases Review Process crystalized into a more rigid stage-gate process, which evolved into the Third Generation New Product Process (Cooper,

1994). New Service Development (NSD) processes have been subject to academic debate (Alam & Perry, 2002; Matthing, Sanden, & Edvardsson, 2004). This process is continuing into an age where servitization plays a key role, and so the developments in service design will continue to fuel the debate (Ostrom et al., 2010).

2.3 Principles of Service Design Thinking

The premises of the SD logic have had a shaping function in the approach to service marketing, and vice-versa. Though the field of service design is interdisciplinary, the management disciple of marketing plays a central role (Lucy Kimbell, as cited in Stickdorn & Schneider, 2010). For this reason, the premises of SD logic resonate throughout the five principles that encompass service design. These principles are the basis of a dynamic language that guides the service design process (Stickdorn & Schneider, 2010) (Table 2).

TABLE 2 – Principles of Service Design

Principle	**Description**
Co-creative	All stakeholders should be included in the service design process.
Sequencing	The service should be visualized as a sequence of interrelated actions
Evidencing	Intangible services should be visualized in terms of physical artifacts
Evidencing	The entire environment of a service should be considered.

(Stickdorn & Schneider, 2010, p 34)

The following section will elaborate on these five principles of Service Design Thinking, and place them within the context of the SD logic.

2.3.1 User-Centered

Four of the foundational premises of the SD logic are particularly strongly related to the user-centered aspect of service design (Stickdorn & Schneider, 2010; Vargo & Lusch, 2004a). These are summarized in Table 3:

TABLE 3 – Foundational Premises That Are User Centric in Nature

Foundational Premise 6	The customer is always a co-creator of value.
Foundational Premise 7	The enterprise cannot deliver value, but only make value propositions.
Foundational Premise 8	A service-centered view is inherently customer oriented and relational.
Foundational Premise 10	Value is always uniquely and phenomenologically determined by the beneficiary.

(Stickdorn & Schneider, 2010; Vargo, 2008)

Placing the customer at the center of service design is essential. Services cannot be created or consumed without the inclusion of the customers (Fließ & Kleinaltenkamp, 2004), and so it follows that they must play a crucial role in the service design process.

Being effectively customer centered requires the development of relational affiliation between the customer and service producer, and it is often found that managers aim to develop such relationships (Alam & Perry, 2002). These relationships positively affect the technical quality of services as well as innovation speed, which in turn has a positive effect on the success of new service development. This is in accordance to Premise 6 and 10, which are both based on the view that customer perception and inclusion drives exchange and value (Vargo & Lusch, 2004a, 2008). When exchange relationships are built up, purchase decisions are based in part on the built up mutual history through

increased loyalty (Czepiel, 1990; Mascarenhas, Kesavan, & Bernacchi, 2006). This is in line with premise 7 of the SD logic (Vargo & Lusch, 2004a).

The effect of participation on service quality and customer satisfaction is also stronger for participation in customer-producer affiliations that have been in place over an extended period of time (Carbonell, Rodríguez Escudero, & Pujari, 2009; Cermak et al., 2011). These findings are strongly in line with Premise 8 of the SD logic, that to be service-centered, a company must inherently be customer orientated and relational (Vargo, 2008).

2.3.2 Co-creative

Six of the foundational premises of the SD logic are particularly strongly related to the co-creative facet of service design (Stickdorn & Schneider, 2010; Vargo & Lusch, 2004a). These are summarized in Table 4:

TABLE 4 – Foundational Premises That Are Co-Creative in Nature

Foundational Premise 4	Operant resources are the fundamental source of competitive advantage
Foundational Premise 6	The customer is always a co-creator of value.
Foundational Premise 7	The enterprise cannot deliver value, but only make value propositions.
Foundational Premise 8	A service-centered view is inherently customer oriented and relational.
Foundational Premise 9	All social and economic actors are resource integrators
Foundational Premise 10	Value is always uniquely and phenomenologically determined by the beneficiary.

(Stickdorn & Schneider, 2010; Vargo, 2008)

Services are created through interactions between the service provider and the customer. Understanding the customer is thus key to encourage the most effective participation (Stickdorn & Schneider, 2010). Early literature already suggested that involving customers in service production can increase productivity (Lovelock & Young, 1979), and that customers should be seen as "partial" employees of the service company in the creation of value (Mills & Morris, 1986). This aspect not only reflects the co-creative nature of services, but also reflects Premise 4 (Vargo & Lusch, 2004a). Premise 6 states that the customer should always be seen as a co-creator of value (Lusch & Vargo, 2006), and therefore can be seen, in part, as an employee of the service delivery process. The fact that customers must participate to consume the service dictates that companies can only offer value propositions, as it is impossible to define the exact value before the co-creative interaction, which is in line with Premise 7 of the SD logic (Vargo & Lusch, 2004a, 2008).

Despite the fact that customers have frequently been regarded as co-producers or "partial" employees (Fließ & Kleinaltenkamp, 2004; Mills & Morris, 1986), the co-creative role of the customer has been the most vividly discussed of all the SD logic premises. Where the original premise 6 determined that the customer was a co-producer of the service (Vargo & Lusch, 2004a), the current notion regards the customer as a co-creator of value (Lusch & Vargo, 2006). Value cannot be created without the participation of customers, and so a shift is observed from 'creating value *for* customers to creation value *with* customers' (Moeller, Ciuchita, Mahr, Odekerken-Schroder, & Fassnacht, 2013, p. 472). This notion also reflects Premise 10 of the SD logic (Vargo & Lusch, 2008).

The needs and expectations of customers, as well as the needs and expectations of other stakeholders, should be considered because co-creation places the customer at the

crucial point of the design process. This is closely in line with Premise 9, as it includes the stakeholder perspective (Vargo & Lusch, 2008). To be effective in considering the diverging range of interests, involving theses customers and stakeholders to co-create the service value proposition can add substantial value to both the new service development, as well as during the service provision (Dong, Evans, & Zou, 2008; Poetz & Schreier, 2012; A. Smith & Fischbacher, 2005). Service loyalty is generated by delivering service quality through the increase of customer satisfaction (Caruana, 2002; Sivadas & Baker-Prewitt, 2000). The experience of co-creation and co-ownership is also likely to have a positive influence on both the long-term engagement and customer loyalty (Lengnick-Hall, 1996; Stickdorn & Schneider, 2010). Premise 8 is reflected in these aspects of the co-creative nature of Service Design Thinking (Lusch, Vargo, & Wessels, 2008)(Vargo & Lusch, 2008).

2.3.3 Sequencing

Four of the foundational premises of the SD logic are particularly strongly related to the sequencing aspect of service design (Stickdorn & Schneider, 2010; Vargo & Lusch, 2004a). These are summarized in Table 5:

TABLE 5 – Foundational Premises That Are Sequencing in Nature

Foundational Premise 2	Indirect exchange masks the fundamental unit of exchange.
Foundational Premise 4	Operant resources are the fundamental source of competitive advantage
Foundational Premise 8	A service-centered view is inherently customer oriented and relational.
Foundational Premise 9	All social and economic actors are resource integrators

(Stickdorn & Schneider, 2010; Vargo, 2008)

Not only the service design process, but also the service provision process has many dynamic and contingent elements, which can be tangible and intangible in physical nature (Stickdorn & Schneider, 2010). This notion is incorporated in Premise 2 of the SD logic (Vargo & Lusch, 2004a). By mapping a service timeline, service designers can deconstruct the service process to get a better of understanding of the system around the service (Stickdorn & Schneider, 2010).

The touch point interactions between the customer and service provider play an important role in the assessment of the quality of the service. These touch points may consist of different social or economic actors, that should all be considered as research integrators, which is held by premise 9 (Vargo & Lusch, 2008). Service providers can only offer value propositions, as is captured by Premise 7 (Vargo & Lusch, 2004a). Customers base their evaluation of value on a previously established reference point (Wood & Moreau, 2006).The value of a service is hard to determine and strongly contingent to the reference point of the customer (Bitner, 1992). It is therefore very important to manage this point of reference, which reflects the view on operant resources of Premise 4 (Vargo & Lusch, 2004a). Creating an accurate sense of expectation is essential for the evaluation of services. The finding that a higher experience-to-expectation evaluation ratio leads to greater satisfaction with the service reflects the importance of positive disconfirmation, and thereby the significance of effectively managing the reference point of customers (Oliver, 1980; Wood & Moreau, 2006).

Sequencing implies is delivered and consumed over an extended period of time (Stickdorn & Schneider, 2010). This suggests that the relationship with customers should also be stretched over a period of time, and therefore be relational in nature. It also implies that

multiple actors will be resource integrators over the duration of this time. This is in line with Premise 8 (Vargo & Lusch, 2004a).

2.3.4 Evidencing

Five of the foundational premises of the SD logic are particularly strongly related to the Evidencing facet of service design (Stickdorn & Schneider, 2010; Vargo & Lusch, 2004a). These are summarized in Table 6:

TABLE 6 – Foundational Premises That Are Evidencing in Nature

Foundational Premise 2	Indirect exchange masks the fundamental unit of exchange.
Foundational Premise 3	Goods are distribution mechanisms for service provision.
Foundational Premise 4	Operant resources are the fundamental source of competitive advantage
Foundational Premise 7	The enterprise cannot deliver value, but only make value propositions.
Foundational Premise 10	The beneficiary always uniquely and phenomenologically determines value.

(Stickdorn & Schneider, 2010; Vargo, 2008)

Customers are likely to base their judgment of the value service to a large degree on physical artifacts and proofs. Premises 2 and 3 of the SD logic highlight that services are offered through a large range of tangible and intangible offerings (Vargo & Lusch, 2004a). This nature of services offerings implies the importance that should also be attached to the physical evidencing. The SD logic holds that goods can only be a distribution of service, and as such can never carry value, which is of course related to the belief that

companies can only make value propositions as is reflected by the Premises 3 and 10 (Vargo & Lusch, 2004a, 2008).

When goods are the evidence of the quality of a service, the importance of effective expectation management is once again reinforced. Customers are likely to use physical evidence to create an expectation of quality, using it as benchmark to evaluate the quality of the service afterwards (Bolton & Drew, 1991; Wood & Moreau, 2006) Value expectation management is therefore highly important, and reflects elements of Premise 4 (Vargo & Lusch, 2004a). Premise 7 holds that products only ever transmit a service rather than deliver value alone, which underlines the importance of evidencing. It also reflects again Premise 2 of the SD logic (Vargo & Lusch, 2004a). In some cases, part of the value of an offering may be derived from the consumption of a product. The SD logic holds than that the value of the offering lies not in the consumption of the product, but that is product is the evidence of how well it served the need. Following this premise, goods will form a large part of the evidence of the quality of the service.

2.3.5 Holistic

Six of the foundational premises of the SD logic are particularly strongly related to the holistic aspect of service design (Stickdorn & Schneider, 2010; Vargo & Lusch, 2004a). These are summarized in Table 7:

TABLE 7 – Foundational Premises of Service That Are Holistic in Nature

Foundational Premise 1	Service is the fundamental unit of exchange
Foundational Premise 2	Indirect exchange masks the fundamental unit of exchange.

Foundational Premise 4	Operant resources are the fundamental source of competitive advantage
Foundational Premise 7	The enterprise cannot deliver value, but only make value propositions.
Foundational Premise 9	All social and economic actors are resource integrators
Foundational Premise 10	The beneficiary always uniquely and phenomenologically determines value.

(Stickdorn & Schneider, 2010; Vargo, 2008)

Services are a complex set of offerings that are consumed in real time and in a physical space, which is in line with Premise 2 (Vargo & Lusch, 2004a). While using a service, consumers will experience perceptions with all senses. This can be considered as the total customer experience. Customers will also experience the evidencing of the service in ways that are not always directly related to the functional value delivery of the service (Ostrom et al., 2010; Stickdorn & Schneider, 2010). Premises 7 and 10 reflect that this total experience is not the same for everyone, and contingent to the evaluation of the value (Vargo & Lusch, 2008). When the experience is performed properly it is "a totally positive, engaging, enduring and socially fulfilling physical and emotional customer experience across all major levels of one's consumption chain" (Mascarenhas, 2006, p. 399). A holistic approach to service design therefore reflects an understanding of the tangible and intangible aspects that influence service evaluation (Wakefield & Blodgett, 1999) and also reflects the holistic nature of the service exchange reflected in Premise 1 (Vargo & Lusch, 2004a).

The notion that companies can only offer value propositions rather than concretely measurable value, as put forward in Premise 7 (Vargo & Lusch, 2004a), also implies that this holistic experience is just an offer. Customers must experience the whole service

within its *servicescape* to be able to judge the value they experience (Bitner, 1992; Reimer & Kuehn, 2005; Vargo & Lusch, 2004a)

Of great importance to the holistic experience of the service encounter is the human interaction component (Bitner, Booms, & Tetreault, 1990). Mapping the moods and feelings of customers is key in understanding their emotions. Not only positive disconfirmation of service performance, but also of the entire service experience lead to higher evaluations (Price, Arnould, & Tierney, 1995). Expectation management becomes a lot easier when a relationship of trust and understanding is built between the service consumer and producer (Wood & Moreau, 2006). This reflects not only the relational and user-centered characteristic of the Premise 6, but also the integration of multiple resource integrators as in Premise 9 (Vargo & Lusch, 2004a, 2008).

2.4 Classifications of Services

There are multiple classification or categorization methods of services. This research makes use of two of these methods. On the one hand, services can be categorized on the basis of type of value that they offer. For this method the categorization is made along the concepts of utilitarian, hedonic and semiotic value (Bloch, 2011). These concepts “should be considered broadly and not restricted to tangible product characteristics” (Bloch, 2011, p. 378). The utilitarian value is derived from the functional usefulness of the service. Hedonic value reflects the pleasurable element of the consumption of a service. Semiotic value is derived from the sign value, such as prestige and exclusivity, which consuming a certain service has (Bloch, 2011). Customers may have range of needs, and may therefore look for a range of values, either within the same services, or across different services that they consume.

Furthermore, services can be classified in terms of the timing of the evaluation of the value in use. This classification system considers services to be search, experience or credence services (Darby & Karni, 1973; Nelson, 1970). Search services allow for accurate estimation of the value of the service before its consumption, whereas experience services require the customer to consume the service before being able to make this value judgment. Credence services are altogether different because they are of such a complex or intrusive nature that it is impossible for customers to objectively evaluate their value. Instead, they rely on more instinctive and intuitive judgments to evaluate the service.

2.5 Market orientation

Of the five elements of Service Design Thinking, the user-centered and co-creative nature of this design approach are most obviously in line with the aims of market orientation (Stickdorn & Schneider, 2010). These are also elements that are closely in line with the premises of the SD logic (Vargo & Lusch, 2004a, 2008), as has been discussed previously. Customer centrality plays an important role in both Service Design Thinking and the SD logic, and is also the main driver of effective customer orientation. Only by analyzing the needs of customers, either expressed or latent, can a holistic experience be designed (Alam & Perry, 2002; Matthing et al., 2004).

Market orientation is defined as “the organization wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organization wide responsiveness to it” (Kohli & Jaworski, 1990, p. 6). Companies may have a reactive or proactive market orientation; respectively focusing on

the expressed or latent needs of customers (Narver, 2004; Yannopoulos & Auh, S.Menguc, 2012). Market orientation is a strategic orientation that aims to facilitate the development of incremental and radical innovations (Atuahene-Gima, 2005). Being reactive lets companies exploit current competences to serve current customers with incremental innovations. Alternatively, proactively market oriented companies will try to develop and explore new competences to serve future customer needs with more radical innovations (Alam & Perry, 2002; Atuahene-Gima, 2005).

Understanding customers requires a future focused approach, as this allows for the inclusion on future customers (Narver & Slater, 1990). Only by learning to include the latent needs of future customers can new product performance be enhanced (Matthing et al., 2004; Yannopoulos & Auh, S.Menguc, 2012). Having a future focus by analyzing latent needs has a strongly positive effect on new product performance (Grinstein, 2008; Narver, 2004). A future focused market orientation is generally considered to be a profitable and beneficial strategic orientation, as it delivers superior customer value (Narver & Slater, 1990; Slater & Narver, 1998).

Many of the benefit and characteristics attributed to market and customer orientation are inherently present in Service Design Thinking and the SD logic. Including customers in the innovation process by means of co-creation does not only alter the quality of the innovative output. It also generates a more innovative image of the companies that use such innovation methods, and lets the outcome be considered more innovative(Hippel, 2005; Schreier, Fuchs, & Dahl, 2012). To establish an understanding of what the important innovations are, companies should involve customers in order to be more

customer-centered (Chandy, Hopstaken, Narasimhan, & Prabhu, 2006; Stickdorn & Schneider, 2010).

On many occasions it is found that interdisciplinary and interdepartmental cooperation is very important of the successful implementation of market orientation (Kirca, Jayachandran, & Bearden, 2005). This interdisciplinary nature is also reflected in the SD logic, which focuses in part on the value of knowledge that is often embedded cross-functional or interdisciplinary cooperation (Vargo & Lusch, 2004a, 2008). A similar notion is rooted in the Service Design Thinking. By sequencing and evidencing, service design is given a holistic perspective, in which many aspects of both the customer experience as well as the service provider are integrated (Stickdorn & Schneider, 2010).

3. Methodology

The current research was designed to uncover higher-order trends in the latent needs of the participants. The research design was qualitative in nature, which allowed for the development of in-depth insights into these needs (Yin, 2009). A group of primary school pupils formed sample population, with the aim of generating original and creative data and insights (Morrow & Richards, 1996). The research was conducted to provide exemplary application of a service design tool (Stickdorn & Schneider, 2010) and with the aim to uncover a definitive mechanism or relationship. This is much in line with the dynamic and contingent nature of the SD logic, and servitization discussion in general (Lusch & Vargo, 2006), and with the concept of evolving trends (Narver & Slater, 1990).

3.1 Customer Journey Maps in Service Design

The service design process consists of four stages (Table 8). Before services can be developed it is crucial to get "a clear understanding of the situation from the perspective of current and potential customers" (Stickdorn & Schneider, 2010, p. 128). This reflects the need for customer orientation as well as customer centrality (Alam & Perry, 2002). Multiple tools may be used at this stage to develop such customer insights. One of these is the development of visualized customer journey maps, which is used in the current study (Stickdorn & Schneider, 2010, p. 158). The customer journey map is an elaborate visualization of the story of the service experience. Its construction is often comprised of a sequence of touch points at which customers interact in some shape or form with the service provider. Systematically evaluating these touch points leads to interesting insights that can be used for problem identification to be included in the service design process (Stickdorn & Schneider, 2010).

TABLE 8 – Stages of the Service Design Process

Stage	**Description**
Exploration	This stage aims to uncover problems to which solutions can be offered.
Creation	Holistic solutions are conceptualized and designed at this stage.
Reflection	At this stage the designed service prototyped and tested.
Implementation	The newly developed service is implemented and offered to customers.

3.2 Sample

The participants in the current study were a group of primary school pupils that attend the public primary school OBS De Wissel in Born (The Netherlands). The sample was

established through purposeful sampling (Marshall, 1996). All pupils were all finishing their last year (group 8) of primary school education. Gender and age are important variables that effect the difference between children (Morrow & Richards, 1996). The group consisted of 35 pupils with ages ranging from eleven (11) to thirteen (13), (mean of 11.7 years, SD of 0.67 years), which provides uniformity in terms of age. In this group sixteen (16)(46%) pupils were male and nineteen (19)(54%) pupils were female, which provides a strong diversity in gender.

The value of using child participation in research is getting increasingly more accepted (Alderson, 2001). Especially in early pilot stages of idea generation, the free-spiritedness of children can lead to interesting and unforeseen insights (Morrow & Richards, 1996). Children often have a less rigid frame of reference. Sometimes it is be better to have less memory so that creativity is not hampered (Moorman & Miner, 1997). Children are often more free-spirited and creative. In situations where creativity is an important driver of success, children might deliver unexpected results (Alderson, 2001). In light of the qualitative and exploratory nature of this study, the generation of new and creative insights is very valuable. For this reason, the use of children is likely to generate creative and unexpected insights, as they are more free-spirited.

3.3 Services Categorization

For this study, six service offerings were selected that are common to children. Children often relate well to ‘pretend situations’, in which they have the opportunity to rely both on their experiences as well as on their imagination for their frame of reference (Alderson, 2001). These services were categorized as search, experience and credence services (Darby & Karni, 1973; Nelson, 1970). The selection of service offerings consisted of two of

each of these services. Seeing as services are complex offerings, it is often hard to say that a service has strictly utilitarian or hedonic value(Bloch, 2011). This distinction becomes increasingly difficult to make as the complexity of the service offering increases (Alam & Perry, 2002). However, within all three categories, one of the services has a more utilitarian nature, and one has a more hedonic nature. This study does not analyze the semiotic value in these services, as the "sign value" (Bloch, 2011, p. 379) in these services is incomprehensive and generally difficult to observe. Table 9 summarizes the services along the two classification schemes.

TABLE 9 – Categorization of the Six Studied Services

	Search Service	**Experience Service**	**Credence Service**
Utilitarian Value	Planning a trip to McDonalds	First day of high school	Going to the orthodontist
Hedonic Value	Going to the cinema	Going to a theme park	Going on holiday

Planning a trip to McDonalds is a service of which the value can be predicted well. The offering and quality are standardized and consistent, so the participants should be able to estimate their evaluation beforehand, which makes this a search service (Nelson, 1970). Fast food restaurants mainly aim at relieving their customers of their hunger within a relatively short time frame. This is a useful and convenient service, which prescribes that it is utilitarian in nature (Boztepe, 2007).

Going to the cinema will generate value that can be predicted well beforehand. A lot of information about movies can be found online or elsewhere, in the form of trailers or reviews for example. The holistic cinema experience is standardized and consistent, making the value relatively easy to predict, which positions it as a search service (Nelson,

1970). Going to the cinema serves less utilitarian needs, but is rather a free time activity to be enjoyed to generate satisfaction. This describes the hedonic nature of this service (Bloch, 2011).

The first day of high school is a time of much uncertainty, and the evaluation of the service is contingent to many facets that are uncontrollable and unforeseeable for the participants. The evaluation of this service can only occur after having experienced the service. These elements make this an experience service (Mitra, Reiss, & Capella, 1999). Educational services are primarily utilitarian in nature, as they are intended to provide the user with valuable knowledge. The Infrastructural elements of this service are also aimed at delivering utilitarian value (Boztepe, 2007).

Going to a theme park is also an experience service, as the evaluation of this service is dependent on many aspects that the participants would be unable to predict. Many of these elements, such as weather and busyness, are out of the control of customers (Nelson, 1970). Going to a theme park is a hedonic service as it aims at offering an enjoyable day and pleasing experience (Desmet & Hekkert, 2007).

Going to the dentist or orthodontist for a checkup is a credence service, as it is not within the scope of the participants to judge the value of that service. The delivery of the service requires the application of a specialized skill that is well beyond the scope of the participants. For this reason the participants are unable to confidently judge the value of the service (Darby & Karni, 1973). Though a dentist sometimes create comfort by relieving pain, the main value delivered to their patients is of practical nature (Bloch, 2011)

Going on vacation is similarly hard for the participants to judge as it often spans over a substantial period of time. The value that it generates therefore is dependent on infrastructures that are difficult to understand or difficult to compare after the consumption (Darby & Karni, 1973). Therefore it is a credence service. The aim of most vacations is to have a pleasurable time and to engage in enjoyable activities. For this reason it should be considered to deliver primarily hedonic value (Chitturi, 2009).

3.4 Data Collection

The collection method embodied multiple elements of the Critical Incident Technique (Ruyter & Scholl, 1995), which is an effective technique to locate the dissatisfactory touch points (Bitner et al., 1990). To obtain the most valuable insights from these pupils, the data-collection method had a social-anthropological approach, in that data was co-produced with pupils (Morrow & Richards, 1996). The data collection was somewhat unorthodox in nature, in that it involved a group of primary school pupils, who expressed themselves in a very creative way. For creativity to flourish it was important to encourage free-spiritedness, and, to stay close to the participant in communication and approach (Ruyter & Scholl, 1995). In the very unstructured approach, the pupils had the freedom to express exactly where the critical incidences were. It allowed for the description and decomposition of the entire service experience.

The pupils were asked to form six different groups, which they could form themselves. Children often enjoy working in a group as they enjoy being together (Alderson, 2001). Each group was presented with one of the service offering as mentioned above. Each of the groups of was first presented with an empty design of a customer journey map. In their respective groups, the pupils were asked to complete the journey map as fully as they

could (Appendix A). They had access to an array of markers, pen and crayons to visualize this journey.

After having completed the journey map the groups were asked to highlight three touch points that could be made ‘cooler, nicer, more fun or less boring’. Individually, the pupils were then asked to draw three pictures in which they described how the situation could be improved (Appendix B). They had access to markers, pen and crayons, as well as printed out visuals to express their suggested improvements. Only after having drawn the improvements were they asked to describe their improvements in writing. This sequence was intended to let the pupils express themselves in a creative way, while still giving pupils who have less confidence in their drawing skills the opportunity to provide their input. The use of these two data collection methods also provides the opportunity for triangulation of the data (Alderson, 2001; Morrow & Richards, 1996).

Throughout the data collection procedure it was made very clear, both orally as through actions taken, that the pupils were free to express themselves as they wished, and that it was to be an enjoyable experience (Alderson, 2001). The pupils were invited by Service Science Factory (SSF) to come to the university to participate in the study. SSF is a service design consultancy associated with University Maastricht, where pupils, researchers and industry experts work together on developing services (Mahr, Kalogeras, & Odekerken-Schroder, 2013). Upon their arrival they were welcomed with sweets and soft drinks, after which the set up and sequence of the activities was explained to them. These refreshments were provided throughout the activity to sustain enthusiasm (Alderson, 2001).

The activity was not mandatory and unrelated to schoolwork or any form of evaluation or examination, which likely promoted the willingness of the pupil to contribute (Morrow & Richards, 1996). This was made clear both orally in the explanations, as well as in print on the printed activity instructions. The provision of soft drinks and candy, as well as ample coloring and other visualization media intended to set a free-spirited, creative and enjoyable atmosphere (Alderson, 2001). This was to aid them in their creative process and to allow them to express themselves in a way that reinforced the disconnection from other school activities.

The study was conducted at the university, which was expected to be a new and unfamiliar location for most of the pupils. It was also expected that a university setting would motivate the pupils to participate enthusiastically, as it was intended to symbolize the seriousness with which their contributions would be handled (Morrow & Richards, 1996).

3.5 Data Analysis

The pupils were asked to from six groups and each group was assigned a service. In their groups they were asked to complete the journey map. In these customer journey maps the participants had been asked to highlight three touch points that needed improvement. The customer journey maps were analyzed and information was distilled from this data. The classification of value of Bloch (2011) was used to try to define the nature of the touch point. Inductive analysis of the individual touch point descriptions however revealed that not all participants experienced the same problems at each of the touch points. This made it unreasonable to classify the touch points on the basis of this classification. Rather, this classification was used for the categorization of the individual problems and solutions

distilled. Table 10 provides a summary of the services that were assigned to each of the groups, as well as the group sizes and the three touch points that each group highlighted for improvement.

TABLE 10 – Customer Journey Map

Service	**Group Size**	**Touch Points**
Planning a trip to McDonalds	4	Traveling to McDonalds Arriving at McDonalds Being hungry
Going to the cinema	5	Waiting in line for the ticket Watching the movie Finishing the movie
First day of high school	7	Biking to school Walking to class Break time
Going to a theme park	5	Going on the rides Going to McDonalds on the way home Being in the car on the way home
Going to the orthodontist	6	Sitting in the chair Dentist feels and looks in your mouth Receiving a present
Going on holiday	8	Waking up early Being on the plane Picking up suitcases

The data collection produced 104 drawings of suggested touch points, which were categorized, abstracted, compared and dimensionalized (Spiggle, 1994). The first step in

the analysis of this data involved the development of a coding scheme to allow for categorization of the date. Inductive logic and iteration was used to 'identify emergent categories from the data' (Spiggle, 1994). By going through the drawing sequentially conceptual themes within each of the suggestions were found. This resulted in the development of 27 themes. A fellow Master (MSc) student coded the drawings and explanations as well. They independently followed the same process to develop a coding scheme. This was done to reduce the potential coding bias (Moeller et al., 2013). Their categorization process led to the development of a coding scheme of 21 themes. A discussion in which the similarities and differences were extensively deliberated led to the conclusion that seventeen (17) themes of the second coding scheme were conceptually in line with the themes of the original coding scheme (Seale, 1999). The four (4) themes that remained after this discussion were added to the original 27 themes. This led to a total of 31 themes.

A number of the 31 themes that resulted out of the two coding schemes were merged on the basis of their conceptual proximity, to develop a more compact set, with which would allow the analysis to be more concise and structured. The final set of themes consists of eighteen (18) themes. From the analysis of these themes, four (4) higher-order conceptual construct emerged (Spiggle, 1994) (Table 11). The definitions of each of the higher-order conceptual construct can be found in Table 12, and were deduced from the themes that they cover. After having established the themes and overarching value constructs, the eighteen themes were used as labels to categorize the drawings. To ensure that the categorization would be done "on the basis of coherent meaning (Spiggle, 1994), the written descriptions as well as drawn descriptions of the touch point improvements were used in the coding process.

TABLE 11 – Overview of Overarching Value Constructs and Themes

Overarching Value Construct	**Physical Dimension**	**Social Dimensio**	**Utilitarian Dimension**	**Hedonic Dimension**
Themes	Souvenir	Community	Speed	Entertainment
	Branding	Interaction	Convenience	Fun
	Appearance	Human Replaces Technology	Food as Need	Distraction
			Customization	Comfort
			Sustainability	Food
		Technology Replaces Human		
		Food as Social Activity		

Microsoft Excel was used to systematically code each of the 104 drawings. The suggestions were categorized on the basis of the nature of the problem (utilitarian or hedonic), the nature of the solution (utilitarian or hedonic), the themes and the age and gender. On the basis of these categorizations, comparison and dimensionalization was applied (Spiggle, 1994). Differences and similarities were explored and anecdotal evidence from both the service journey maps as well as the suggested improvements was integrated to create a deeper insight.

TABLE 12 – Description of Overarching Themes

Overarching Value Construct	Description
Physical Dimension	The service or solution has a prominent physical aspect, which plays a key role in the signaling or delivery of value.
Social Dimension	The service or solution is delivered or consumed has a social features or consequences. This may of example be consumed within a social context, or have an influence of the social interaction between human and human or human and machine
Utilitarian Dimension	The service or solution has a practical dimension that serves a need that is functional in nature.
Hedonic Dimension	The service or solution has an enjoyable element that serves a need that is not necessarily functional in nature, but rather provides a pleasing value.

4. Results

In a first phase, the frequencies of the nature of the problems and solutions were compared and contrasted. In a second phase, the frequencies of the overarching value constructs and themes were compared and contrasted.

4.1 Problems and solutions

35 pupils were asked to draw and explain solutions to the problems at each of the three touch points they highlighted. In total they created 104 drawings (One pupil produced only two drawings). A small number of pupils included multiple problems and solutions within their suggestions. This explains why there are 108 problems and 108 solutions. There are substantially more problems with a utilitarian nature (61%) than with a hedonic nature (39%). The distribution of utilitarian and hedonic solutions is roughly equal (45% and 55% respectively) (Table 13).

TABLE 13 – Frequencies of Problems and Solutions

Problems		**Solution**	
Utilitarian	66	Utilitarian	49
Hedonic	42	Hedonic	53
TOTAL	**108**		**108**

Using the service classifications as discussed above (Bloch, 2011; Darby & Karni, 1973; Nelson, 1970) the frequencies of utilitarian and hedonic problems are disentangled (Table 14). Utilitarian problems were substantially more common among hedonic services and under credence services. Hedonic problems were mentioned substantially more often in utilitarian services as well as in experience services.

TABLE 14 – Problems per Service Classification

Utilitarian Problems

		Service Classification			
		Search	Experience	Credence	TOTAL
Service	Utilitarian	9	4	12	25
Classification	Hedonic	9	9	23	41
	TOTAL	18	13	35	

Hedonic Problems

		Service Classification			
		Search	Experience	Credence	TOTAL
Service	Utilitarian	3	14	9	26
Classification	Hedonic	5	10	1	16
TOTAL	8		24	10	

TABLE 15 – Cross-Tabulation Problem Natures and Solution Natures

		Solution	
		Utilitarian	Hedonic
Problem	Utilitarian	41	29
	Hedonic	12	34

It was observed that the nature of the problem does not determine in advance the nature of the offered solution (not all utilitarian problems had a utilitarian solution and not all hedonic problems had a hedonic solution). In a next step the problem and solutions were cross-referenced. Table 15 shows how frequently each utilitarian problems and hedonic problems were met with either utilitarian or hedonic solutions.

Utilitarian problems were most frequently met with utilitarian solutions. Likewise, hedonic problems were most frequently met with hedonic solution. What is also apparent in this table is that utilitarian problems were considerably more frequently met with hedonic solution, than hedonic problems were met with utilitarian solutions.

4.2 Overarching Value Constructs and Themes

Out of the initial data categorization emerged eighteen (18) themes and four (4) overarching value constructs. The frequencies with which these themes appeared are summarized in Table 16. The overarching value constructs are approached as different dimensions of the value needs. The *Hedonic Dimension* and *Social Dimension* were represented more frequently than *Physical Dimension* and *Utilitarian Dimension* (32%, 28%, 24% and 16% respectively). *Appearance*, *Interaction*, *Speed*, *Convenience*, *Entertainment* and *Fun* appeared substantially more often than other themes.

TABLE 16 – Frequencies of Overarching Value Constructs and Themes

Physical Dimension		**Social Dimensio**		**Utilitarian Dimension**		**Hedonic Dimension**	
Souvenir	13	Community	16	Speed	34	Entertainment	40
Branding	16	Interaction	42	Convenience	31	Fun	31
Appearance	25	Human Replaces Technology	11	Food as Need	4	Distraction	6
				Customization	8	Comfort	22
				Sustainability	2	Food	23
		Technology Replaces Human	19				
		Food as Social Activity	9				
TOTAL	**46**		**72**		**60**		**81**

TABLE 17 - Cross-Tabulation Overarching Value Constructs

It was observed that the overarching value constructs and themes did not occur in isolation of each other. Many of the problems and suggestions had elements of multiple of overarching constructs and themes. Table 17 shows the frequencies that two of the overarching value constructs were found in same specific solution. The *Social Dimension* was uncovered frequently in suggestions there had either *a Utilitarian Dimension* or a *Hedonic Dimension*. The *Social Dimension* was also found to be mentioned when *Physical Dimension* were mentioned, but with a lower frequency. The *Physical Dimension* was uncovered most frequently in situations where the suggestion had a clear *Hedonic Dimension*, and substantially less so when the suggestions had a more prominent *Utilitarian Dimension*.

TABLE 18 – Pearson Chi-Squared Correlations of Overarching Value Constructs

		Overarching Value Construct			
		Physical Dimension	Social Dimension	Utilitarian Dimension	Hedonic Dimension
Overarching Value Construct	Physical Dimension		35	17	42
	Social Dimension			42	57
	Utilitarian Dimension				37
	Hedonic Dimension				

A Pearson's Chi-Squared Test was used to analyze the significance of the frequencies of correlations that emerged from the data. Table 18 shows that three dimensions had a positive correlation, and three dimensions were negatively correlated. All correlations were significant at the 0.01 significance level, except for the negative correlation between the *Social* and *Utilitarian Dimension*, which was only significant at the 0.05 level. This means that *Physical Dimension* is significantly positively correlated to both the *Social* and *Hedonic Dimension,* but significantly negatively correlated to the *Utilitarian Dimension*. It also means that *Hedonic* and *Utilitarian Dimension* were significantly negatively correlated. The *Social Dimension* is significantly positively correlated to the other dimensions, except to the *Utilitarian Dimension*.

	Physical Dimension	Social Dimension	Utilitarian Dimension	Hedonic Dimension
Physical Dimension	1	,389**	-,949**	,727**
Social Dimension		1	-,169*	,580**
Utilitarian Dimension			1	-,481**
Hedonic Dimension				1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 19 shows these patterns and links broke down to the theme level. It shows the frequencies that two of the themes were found in same specific solution. The shaded measurements represent the correlations that occurred more than five (5) times. Table 20 shows the significance of the correlations between themes, which was calculated using a Pearson's Chi-Squared Test.

A number of clusters appear that show the linkages between numerous of themes. *Interaction* was frequently found alongside *Appearance*, *Community,* and *Human Replaces Technology*. Table 20 reveals that these themes are significantly correlated at the 0.01 significance level. This provides evidence for their negative correlation. *Speed* and *Convenience* was also frequently found in suggestions that had an element where *Technology Replaces Humans*. These themes are significantly correlated at the 0.01 significance level, as can be seen in Table 20. This significance provides support for the positive correlation of these themes. The themes *Interaction and Community* are negatively correlated with *Speed* and *Convenience. The chi-squared analysis provides support for this positive correlation at the 0.01 significance level.*

A large cluster can be found between the themes *Souvenir*, *Branding*, *Appearance*, *Community* and *Interaction*, and *Entertainment* and *Fun*. Most of these positive correlations are significantly correlated at the 0.01 significance level. The cluster *Comfort* and *Food* played a particularly large role in suggestions where Community, *Interaction* and *Human Replaces Technology* were important themes. These positive correlations are also significant at the 0.01 significance level. Both of these clusters are therefore composed of significantly correlated themes. This provides the clusters with more support, and gives insight into the functioning of the interactions between the dimensions.

TABLE 19 – *Cross-Tabulation of Themes*

		Physical			**Social**					**Utilitarian**					**Hedonic**				
		Souvenir	Branding	Appearance	Community	Interaction	Human Replaces Technology	Technology Replaces Human	Food as Social Activity	Speed	Convenience	Food as Need	Customization	Sustainability	Entertainment	Fun	Distraction	Comfort	Food
Physical	Souvenir		5	1	2	4	0	1	2	3	4	0	1	0	7	8	1	0	2
	Branding			2	5	4	4	0	4	4	4	1	1	0	7	7	0	1	8
	Appearance				2	14	5	6	3	4	8	0	1	0	15	6	5	10	5
Social	Community					7	1	0	2	0	2	0	1	0	6	10	2	1	6
	Interaction						10	3	4	7	8	2	4	0	20	8	5	14	11
	Human Replac Technology							0	3	0	4	0	1	0	5	0	0	7	5
	Technology Replac Human								0	11	11	0	2	1	5	2	1	3	0
	Food as Social Activi									2	3	0	1	0	6	3	0	3	9
Utilitarian	Speed										13	2	0	2	6	7	1	0	5
	Convenience											0	2	0	6	4	1	10	6
	Food as Need												0	0	1	0	0	0	4
	Customization													0	4	1	0	3	5
	Sustainability														0	1	0	0	0
Hedonic	Entertainment															11	5	6	11
	Fun																1	2	5
	Distraction																	0	0
	Comfort																		7
	Food																		

TABLE 20 – Pearson Chi-Squared Correlations of Themes

	Souvenir	Branding	Appearance	Community	Interaction	Human Replac Technology	Technology Replaces Human	Food As Soc Activity	Speed	Convenience	Food As Need	Customization	Sustainability	Entertainment	Fun	Distraction	Comfort	Food
Food	-,030	,432**	,078**	,315**	,358**	,426**	-,405**	,869**	-,129**	-,108**	,792**	,639**	-,334**	,355**	-,027	,014	,248**	1
Comfort	-,336**	-,333**	,542**	-,116**	,598**	,751**	-,013	,136**	-,269**	,303**	,024	,415**	-,440**	,156**	-,266**	,220**	1	
Distraction	,168**	-,156**	,776**	,232**	,683**	,342**	,066*	,000	-,060*	-,094**	,008	,165**	-,237**	,730**	,118**	1		
Fun	,624**	,351**	,028	,622**	,060*	-,296**	-,166**	,028	,059*	-,216**	-,097**	-,138**	,307**	,263**	1			
Entertainment	,410**	,221**	,596**	,298**	,566**	,338**	-,038	,415**	-,084**	-,154**	,180**	,441**	-,248**	1				
Sustainability	,043	-,109**	-,275**	-,188**	-,282**	-,554**	,488**	-,363**	,806**	,081**	,054*	-,439**	1					
Customization	-,025	,031	,169**	,147**	,473**	,431**	-,163**	,445**	-,295**	-,058*	,416**	1						
Food As Need	-,064*	,311**	-,070**	,118**	,339**	,232**	-,188**	,527**	,251**	-,117**	1							
Convenience	-,062*	-,196**	,110**	-,345**	-,024	,043	,650**	-,147**	,468**	1								
Speed	,070**	-,041	-,104**	-,298**	-,069**	-,323**	,631**	-,194**	1									
Food As So Activity	,088**	,464**	,102**	,226**	,209**	,345**	-,425**	1										
Technology Replaces Human	-,114**	-,406**	,172**	-,462**	-,121**	-,270**	1											
Human Repla Technology	-,245**	,007	,481**	,026	,754**	1												
Interaction	,073**	-,065*	,567**	,285**	1													
Community	,323**	,416**	-,024	1														
Appearance	-,082**	-,237**	1															
Branding	,459**	1																
Souvenir	1																	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

5. Discussion

The data was collected to uncover latent needs of customers. The data analysis abstracted the problems and suggestions to categorize the needs they reflected into nineteen themes and four overarching value constructs. These overarching value constructs and themes were then compared and contrasted. Not only does the empirical value of qualitative research lie in the connection and comparison of constructs (Spiggle, 1994), also the practical applicability of the results is dependent on the connections that arise. Out of the data analysis a number of propositions were developed. In a conceptual framework these propositions are combined to position the overarching value constructs in relationship to each other.

5.1 Problems and Solutions

Utilitarian problems were found to be substantially more common among hedonic services and hedonic problems were mentioned substantially more often in utilitarian services. This suggests that these values are not delivered in isolation of each other. The initial analysis of the overarching value constructs also revealed that they should be seen as dimensions of the delivered value. The motivation behind servitization, namely to better meet the different value needs of customers by offering a single solution, is reflected in this finding (Vandermerwe & Rada, 1988). This finding is also in line with the finding that the Total Customer Experience is multifaceted with regards to value dimensions (Mascarenhas et al., 2006). A holistic approach to value delivery is also strongly in line with the fifth premise of Service Design Thinking (Stickdorn & Schneider, 2010)

Most utilitarian problems were met with utilitarian solutions and most hedonic problems were met with hedonic. However, while many (29) other utilitarian problems were met with a hedonic solution, only a few (12) hedonic problems were met with a utilitarian solution (Table 15). An explanation for this finding may be that there exists a hierarchal structure that prescribes that utilitarian value must first be delivered before hedonic value can be delivered. Much of the literature does not identify such a hierarchy, but instead views utilitarian and hedonic as values that can be achieved simultaneously (Holbrook, 2002; Rintamäki, Kanto, Kuusela, & Spence, 2006). This research finds a similar possibility, but only after the utilitarian value infrastructure is in place.

The Customer Journey Map of the hedonic service *Going on Vacation* started with planning and booking of the holiday. The Customer Journey Map of *Going to the Movies,* similarly started with the selection procedure of the movie that participants would watch. These examples suggest that in order for hedonic value to be delivered, a utilitarian infrastructure needs to be in place to deliver that hedonic value. It also suggests that hedonic value in a number of services can be considered as an 'add-on', to be delivered after the utilitarian infrastructure is established. This in contrast to research that suggests that one value cannot restrict the other value (Babin, Darden, & Griffin, 1994). The distribution of problems and solutions in this research however provides ground for such a hierarchy, whereby a poor utilitarian infrastructure decreases the hedonic value.

The distribution of utilitarian and hedonic problems between search, experience and credence services(Darby & Karni, 1973; Nelson, 1970) provides more support for this hierarchal characteristic. Relatively few utilitarian and hedonic problems were identified in search services (Table 14). This suggests that participants were able to predict and judge

the value of the service before hand. This implies that they should have experienced few negative disconfirmations, which would have led to limited problem identification (Bolton & Drew, 1991; Wood & Moreau, 2006), as is suggested by the results. The proposed mechanisms of this explanation allow for the development of the following proposition:

> *Proposition 1*: A hierarchal characteristic requires a utilitarian infrastructure to be in place to be able to evaluate hedonic value.

Hedonic problems were identified substantially more frequently in experience services than in credence services. The proposed hierarchal characteristic of the two value levels indicates that to evaluate the hedonic value, the utilitarian value needs to be evaluated first. Experience services can be evaluated after their consumption. This implies that the utilitarian value and infrastructure can be evacuated so that the hedonic value can also be evaluated. This might explain why the hedonic value level resulted in more negative disconfirmation, and therefore more problem identification. Negative disconfirmation is often met with an emotional reaction, which might also play a role in formulating hedonic problems (Wood & Moreau, 2006).

Credence services cannot be evaluated confidently, even after their consumption, so that the consumer cannot evaluate the utilitarian value and infrastructure or the hedonic value well. The proposed hierarchal characteristic of the two value levels therefore implies that when the utilitarian value cannot be evaluated, neither can the hedonic value level. This would explain why more negative disconfirmation was encountered at utilitarian level in credence services.

5.2 Overarching Value Constructs

The services that were analyzed reveal that it is unreasonable to say that all services deliver solely utilitarian or solely hedonic value. Rather, there seems to be an element of both in all of these services, This builds on the proposed hierarchal characteristic of these value levels. A number of participants provided solutions that were both utilitarian and hedonic in nature, which provides further support for their bilateral relationship. This is in line with the finding that especially more complex services consist of both *Utilitarian* and *Hedonic Dimensions* (Babin & Kim, 2001). One of the participants suggested in the same suggestion that "rides should be more fun, and the cues should be shorter", in reference to an improvement at the theme park. This example shows that, within a specific service, the value is in part derived from a *Utilitarian Dimension* and in part from its *Hedonic Dimension* (Babin et al., 1994). Holbrook (2002) frames utilitarian and hedonic value respectively as extrinsic and instinct value, and thus places them on a continuum. It is thus proposed that the *Hedonic* and *Utilitarian Dimensions* should be seen as opposite sides of a continuum.

> *Proposition 2*: *Hedonic* and *Utilitarian Dimensions* are on opposite sides of the same continuum.

Table 17 and 18 reveal that a *Physical Dimension* is mentioned substantially more frequently in combination with the *Hedonic Dimension* than with the *Utilitarian Dimension*. This suggests that the *Physical Dimension* plays an important role in shaping the *Hedonic Dimension.* In the Customer Journey Map that was developed for the service of *Going to McDonalds*, Multiple participants expressed their excitement of seeing the well-known yellow "M" sign. This finding in line with the findings of Bitner (1992), who suggests that

the physical environment plays a strong influence of the senses, and in that way determine whether services are found to be pleasing or not.

The proposed hierarchal characteristic of the utilitarian and hedonic value levels might also offer an explanation to the *Physical Dimension* is negatively correlated to the *Utilitarian Dimension.* The *Physical Dimension* enhances the *Hedonic Dimension* (Bitner et al., 1990). However the *Utilitarian Dimension* of the service should first be considered, before this enhancement can be realized if the hierarchal characteristic holds. These correlations lead to the following proposition:

> *Proposition 3*: The *Physical Dimension* supports the delivery of the *Hedonic Dimension*.

The *Social Dimension* of the value delivery is mentioned frequently in combination with all of the other three dimensions. This suggests that it plays a role in the value delivery through all of the other constructs. Previous findings suggest that servicescape plays shaping role in the value delivery. The servicescape is not only physical but also social in nature, and its shaping role would therefore explain the influence of the *Social Dimension* on the other Dimensions (Reimer & Kuehn, 2005). The *Social Dimension* is mentioned particularly often in combination with a *Hedonic Dimension*, but also rather frequently with *Utilitarian* and *Social Dimensions*. The Pearson's Chi-Squared Tests find particular significance for the correlation between the *Social Dimension* and the *Physical* and *Hedonic Dimensions.*

The proposed hierarchal characteristic of the utilitarian and hedonic value levels might offer an explanation to these findings. It is found that the *Social Dimension* enhances the *Hedonic Dimension* directly, and indirectly by enhancing the *Physical Dimension.* However, the *Utilitarian Dimension* of the service should first be considered, before these enhancements can be realized. One participant explained that they "wanted to talk over the day and all the things that had happened", in the car on the way home from the theme park. An example like this shows that a *Social* and *Physical Dimension* makes the *Utilitarian* car ride more *Hedonic*. This is also in line with the findings of Bitner et al. (1990), which stresses the importance of the social and physical environment on the service evaluation. The themes *Interaction and Community* are negatively correlated with *Speed* and *Convenience, but positively correlated with Technology Replaces Human.* These correlations also reflect that a utilitarian infrastructure needs to be established before themes that have a stronger relation to hedonic value delivery can be deployed (Wakefield & Blodgett, 1994).

The frequency with which the *Social Dimension* of services was highlighted in the data underlines the co-creative nature of the relationship between customers and services providers (Fließ & Kleinaltenkamp, 2004). Value co-creation is also a corner stone of the SD logic and Service Design Thinking (Lusch & Vargo, 2006; Stickdorn & Schneider, 2010). Because all value is co-created, it follows that the Social Dimension has an effect on all of the other value dimensions. *Comfort and Entertainment* played a particularly large role in suggestions where *Community*, *Interaction* and *Human Replaces Technology* were important themes. These themes reflect the *Hedonic Dimension* that coincides with *Social Dimension*. It also shows that although services are co-created by the consumer and the service provider (Fließ & Kleinaltenkamp, 2004), they also often happen in a

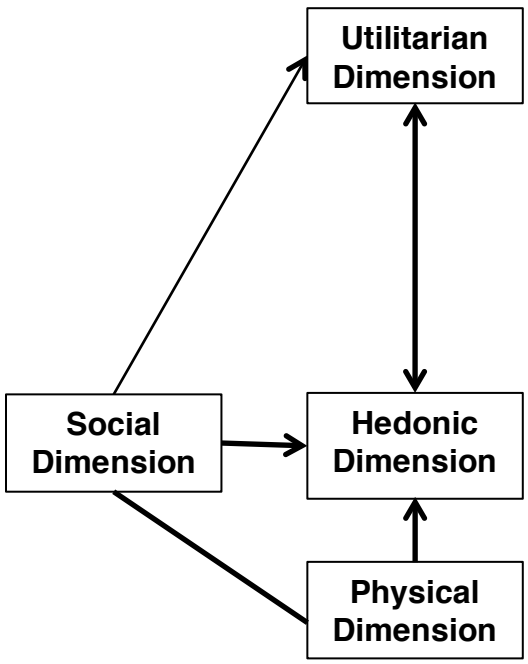
broader social context that plays a large role in determining the value (Reimer & Kuehn, 2005).This leads to the following proposition:

> *Proposition 4*: The *Social Dimension* enhances the value that is delivered through the other dimensions.

5.3 Visualization of Proposed Relationships

The Figure 2 visualizes the proposed relationships between the dimensions. It thus integrates the four propositions that are made above. It advocates a holistic approach to service design (Stickdorn & Schneider, 2010) which is also strongly in line with the concept of servitization (Vandermerwe & Rada, 1988) This is also reflected in the distribution of problems per service classification, and the hierarchy of value levels that is deduced from that. It also shows that the participants attach importance to both the *Utilitarian* as well as the *Hedonic Dimensions* of services.

FIGURE 2 – Visualization of Proposed Relationships



A large cluster is found between the themes *Souvenir*, *Branding*, *Appearance*, *Community* and *Interaction*, and *Entertainment* and *Fun*. In this cluster the *Social*, *Physical* and *Hedonic Dimensions* are correlated, which supports the focus that should be placed on holistic service design (Bitner, 1992; Stickdorn & Schneider, 2010). It also provides further support for the idea that the hierarchal characteristic determines that the *Utilitarian Dimension* of the value needs to be in place first, so that the *Social*, *Physical* and *Hedonic Dimensions* can be delivered.

5.5 Limitations

The current research was designed and conducted to uncover the higher-order trends in the latent needs of the participants. The qualitative nature of the research design allowed for the generation of in depth insight. But while this study produced a comprehensive conceptual framework, it was not without imperfections. Specifically, there are five clear drawbacks in the conducted study. They are related to the qualitative nature of the research, the subjectivity of the service classification selection, the sample, the social cohesion and influence within the sample, and the question formulation in the data collection.

Firstly, the limitations of qualitative data have been extensively discussed, and therefore also apply to the current study. Concerns about the external reliability deal with the replicability of the study (Seale, 1999). The exact social structures of this particular class of pupils will not only have played a role in the data outcome, but are also particularly hard to replicate. However, the fact that the selected pupils attended a regular public primary school and had a large diversity in gender increases the replicability. Nonetheless, it would be extremely difficult to replicate a group of pupil that have the exact same

characteristics as this group. The internal reliability concerns are related to the replicability of the found results (Singleton & Straits, 2010). This is also a common concern in qualitative research, but measures were taken to counter some of these concerns. The use of a systematic coding scheme with the use of the second coder decreased the coder bias, and thereby decreases the threat that instrumentation has on internal validity (Singleton & Straits, 2010). However, this problem can never be completely resolved, as "no act of observation can be free from the underlying assumptions that guide I" (Seale, 1999, p. 148).

Secondly, two classification schemes were used in this research to categorize services. Although their selection was conducted carefully and with the aim of finding suitable and encompassing classification schemes, they were selected subjectively. Furthermore, the services that were selected to represent these classifications were also selected subjectively, based on their compliance with a number of defining characteristics of the service. A more in-depth analysis of these classifications showed that their boundaries are in practice not as clearly defined as in theory. For example, it is not unlikely that the children attach hedonic value to *Going to McDonalds*. Especially in contexts such as birthday parties, it is not unlikely that *Going to McDonalds* is considered an enjoyable treat. However in comparison to *Going to the Cinema*, it does clearly deliver a more utilitarian purpose. Moreover, the repetitive mention of 'hunger' in the responses implies that this service does also service a prominent utilitarian need. Similarly, the classification of *Going on Holidays* as a credence service is ambiguous, as the participants might be able to draw on past experiences of holidays to compare and contrast, and thus generate a more reliable evaluation.

Additionally, the selected sample was achieved through purposeful sampling (Marshall, 1996). The sample of young pupils allowed for the generation of new and insightful ideas, but might threaten the generalizability of the findings. The abstracted themes and dimension are not infantile, and likely to occur in adult needs as well. Their frequencies are however likely to be strongly influenced by the children's younger age. For example, it is not unlikely that children are more focused on enjoying themselves. Also there was no mention of pricing, which is not unlikely be a theme among adult needs.

Within this sample, strong social ties and mechanisms were likely to have been in place, as all the pupils knew each other and were in the same year of primary school. Such group dynamics are likely to have influenced the outcome of the study. To give all children a chance to contribute their suggestions, the pupils were asked to complete the second half of the data collection on their own. However, they remained seated at the same table and even though they were told to work alone, there appeared to be an overlap in the content of these suggestions.

Lastly, the results show a clear focus on the *Hedonic Dimension* of services. The question asking for suggestions requested the pupils to consider in what ways the service could be made 'cooler, nicer, more fun or less boring'. This frame was selected on the basis of the assumption that the pupils would be most creative when trying to make the service 'cooler, nicer, more fun or less boring'. However, these are all aspects that would make the service more hedonic. Had the question asked to make the services 'better, faster, easier or more reliable', it is not unreasonable to expect that the answers would have been different.

6. Conclusion

The world of service science and services marketing is relatively new and has remained largely underexposed (Grove et al., 2003; Ostrom et al., 2010). This study used qualitative research to uncover trends in the service needs of customers. The study proposes four propositions that are united in a conceptual framework. These propositions characterize the themes and overarching value constructs that shape the needs to customers. The findings of this study make four broad theoretical contributions and have four distinct managerial implications. Due to the exploratory nature of the study, the findings provide above all abundant opportunities for future research that will give further insight and validity to the current findings.

6.1 Theoretical contributions

Firstly, the literature research analyzed the relationship of SD logic (Vargo & Lusch, 2004a, 2008), This is Service Design Thinking (Stickdorn & Schneider, 2010) and market orientation (Narver & Slater, 1990). By cross-referencing the premises of the SD logic to the principles of service design and market orientation, these concepts are placed in a triangular relationship. It thereby contributes a comprehensive approach to combining theory and practice, which is a core component of service design and science (Ostrom et al., 2010).

Secondly, a hierarchy of value levels is proposed, in which the utilitarian value is required to be in place so that hedonic value can be delivered. This finding is in slight contrast to

other literature that suggests that under all circumstances utilitarian value and hedonic value van be achieved simultaneously (Babin et al., 1994; Holbrook, 2002; Rintamäki et al., 2006). The hierarchal characteristic found in this study suggests that there is also a sequentially element in these value levels. This finding is in line with the fourth principle of This is Service Design Thinking (Stickdorn & Schneider, 2010).

Thirdly, the study finds support for the holistic characteristic of services that is also prescribed by the SD logic (Vargo & Lusch, 2004a), and is a outcome of companies going through servitization (Vandermerwe & Rada, 1988). Initial support for the relationship between the *Hedonic*, *Social* and *Physical Dimensions* is proposed, but will require substantially more research to gain more comprehensive ground. The holistic nature and interaction of value dimensions is captured in a proposed conceptual framework. This framework also offers an initial visualization of the proposed relationships between the dimensions.

Lastly, it was found that insights from Customer journey map in combination with critical incident technique could be categorized into different themes and overarching conceptual construct. This finding is in line with findings of Bitner et al. (1990). It therefore provides further support for using this method when trying to develop insight into trends in consumer needs.

6.2 Managerial Implications

Firstly, this study effectively uses tools discussed in This is Service Design Thinking (Stickdorn & Schneider, 2010). Service designers and managers of companies going

trough servitization should therefore consider how the tools and insights presented by this work might help them to develop services more effectively. This study framed these tools in a SD logic mindset. By going through these design and servitization processes in the mindset of the SD logic, more clarity could be established within this joint frame of reference.

Secondly, the proposed hierarchal characteristic of utilitarian and hedonic value levels has strong managerial implications. The utilitarian infrastructure of a service needs to be carefully considered, also when the main value of the service is of a hedonic nature. The effectiveness of this infrastructure determines the value of the *Utilitarian Dimension*, and is needed to deliver utilitarian and hedonic value. Service Design Thinking tools might also help to develop this sequential understanding of the service, as is highlighted in fourth principle (Stickdorn & Schneider, 2010).

The results of this study provide support for holistic service design. Service designers should be aware of this, and consider not only the hedonic or utilitarian values that their services deliver. Furthermore, the study also provides initial insight into the dynamics of the *Social* and *Physical Dimension* when delivering hedonic value. When designing and developing services, these dynamics should be included in the service design. In that way, the servicescape (Wakefield & Blodgett, 1994) is composed not only of a *Physical* but also of a *Social Dimension* that influences the hedonic value.

The prominent role of the *Social Dimension* in the delivery of value also has managerial implications. When designing services, the *Social Dimension* should also be extensively considered. This dimension is not only related to the interaction between the service

provider and the customer in which the service is actually delivered (Fließ & Kleinaltenkamp, 2004). The service is likely to be consumed within a broader social context, and therefore not only the psychological mechanisms but also sociological mechanisms should be considered.

6.3 Future research

The research outlook in this field is broad and extensive. There are very many opportunities to develop further insight and understanding. The propositions that are put forward in this study might be seen as an exploratory foundation to uncover further mechanisms between the overarching dimensions. They are initial and rough propositions that require much more quantitative and in-depth verification.

The relationship between the *Utilitarian Dimension* and the *Hedonic Dimension* is complicated, and while this study shows initial support for placing them on a hierarchical continuum, this relationship needs to be further uncovered. It became apparent in this study that the *Social* and *Physical Dimension* play an important role in delivering mainly hedonic value. The mechanisms by which they do so however remain strongly underdeveloped. Selecting a different, larger, or more diverse sample might also uncover other dimensions of value that play a shaping role.

A clear way to increase the validity to the current finding would be to increase the scope and scale of the study. The current sample was small and limited in terms of diversity. Increasing the sample to span across multiple age groups and backgrounds would increase the generalizability of the results. Also the current social cohesion within the

group is likely to have had a strong effect on the output of the experiment. It would be worthwhile investigating both the effect of this social cohesion, as well as the output that would result from less social cohesion.

Lastly it would be very useful to categorize services along other service classifications to uncover new relationships. The service classifications selected in this study were chosen subjectively, and so it follows that other classification schemes might generate different results.

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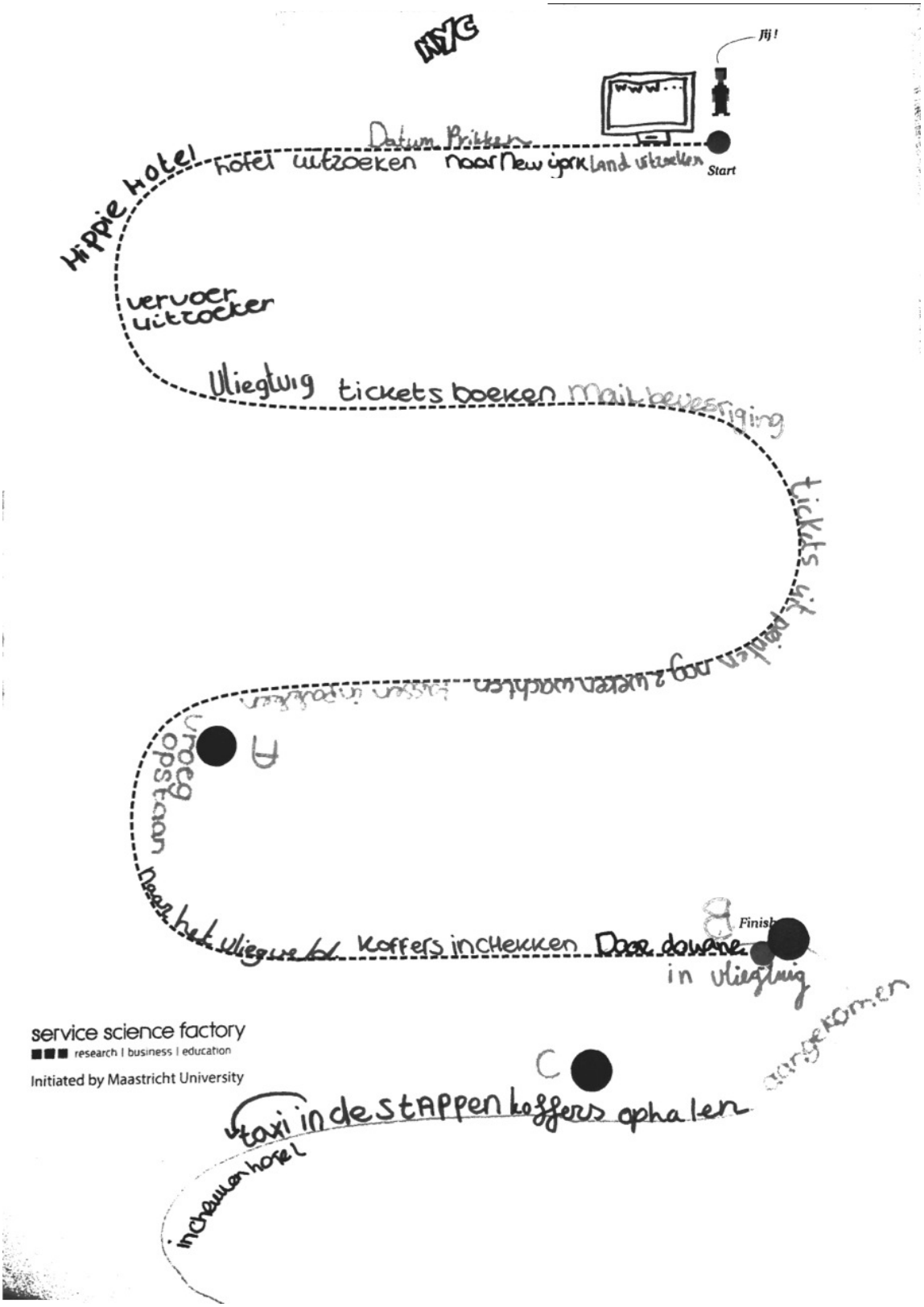
Appendix A


NYC
Jij!
Datum Britten
Hotel uitzoeken
naar New York
Land uitzoeken
Start
Hippie Hotel
vervoer uitzoeken
Vliegtuig tickets boeken
mail bevestiging
tickets uitprinten
2 weken wachten
Finish
koffers inchecken
Douane
in vliegtuig
service science factory
research | business | education
Initiated by Maastricht University
taxi in de stappen
koffers ophalen
inchecken hotel

Appendix B

Mijn naam:

Ik ben een ~~jongen~~/meisje: meisje

Mijn leeftijd: 12 JAAR

Ik zit op school in groep: 7/8

Stel je voor dat jij de dienst zou kunnen veranderen! Wat zou jij doen om de dienst COOLER, VETTER, LEUKER OF MINDER SAAI te maken? Teken drie plaatjes van een stripverhaal om dat duidelijk te maken.

Plaatje a.

Plaatje b.

Plaatje c.

Je mag ook de achterkant van dit blaadje gebruiken als je meer ruimte nodig hebt!

service science factory
research | business | education
Initiated by Maastricht University